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Applicants:	Duane L. Porter, et al.	§	
		§	Group Art Unit: 2126
Serial No.:	09/843,682	§	
		§	Examiner: Charles E. Anya
Filed:	April 27, 2001	§	
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For:	Distributed Extract, Transfer, and Load (ETL) Computer Method	§	
		§	
		§	

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May 27, 2005
(Date of Mailing)

Karen A. Harris
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APPEAL BRIEF

Dear Sirs:

This Appeal Brief is filed in support for the appeal in the above referenced application and is filed pursuant to the Notice of Appeal filed April 25, 2005. This Appeal brief is submitted in triplicate.

Pursuant to 37 CFR § 41.20(b)(2), the Appeal Brief fee of $500 is to be charged to Deposit Account No. 21-0765 as indicated on the attached Fee Transmittal sheet.

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I. REAL PARTY IN INTEREST

The real party in interest in the present application is the following party: Sprint Communications Company L.P.

II. RELATED APPEALS AND INTERFERENCES

None.

III. STATUS OF CLAIMS

A. Total Number of Claims in the Application

The claims in the application are: 1-23

B. Status of All Claims in the Application

1. Claims cancelled: None
2. Claims withdrawn from consideration but not canceled: None
3. Claims pending: 1-23
4. Claims allowed: None
5. Claims rejected: 1-23

C. Claims on Appeal

The claims on appeal are: 1-23

IV. STATUS OF AMENDMENTS

As indicated in the April 5, 2005 Advisory Action, all of the amendment have been entered in the present case.

V. SUMMARY OF INVENTION

As background, a distributed computing system transfers data from at least one source to at least one target via at least one router. Traditionally, the router performed various processing steps associated with transfer of data, including *extracting* the data from the sources, *transferring* the extracted data to the targets, and *loading* the transferred data onto the targets. Because the router performs these processing steps for all of the data transferred within the distributed computing system, the router has typically been the bottleneck within the distributed computing system.

The present invention isolates the router from the extract and load steps, thereby increasing the router efficiency. More specifically, the present invention uses at least one upstream component and at least one downstream component to perform the extract and load steps, respectively, thereby isolating them from the router. The upstream component extracts the data from the source without assistance from the router. Similarly, the downstream component loads the data onto the target without assistance from the router. Isolating the extract and load steps from the router allows the router to direct substantially all of its processing capacity towards transferring data between the upstream and downstream components. Focusing the router's processing capacity on data transfer increases the throughput rate of the router, thereby increasing its efficiency. Because the router represents the bottleneck in the distributed computing system, an increase in router efficiency leads to a corresponding increase in efficiency of the distributed computing system.

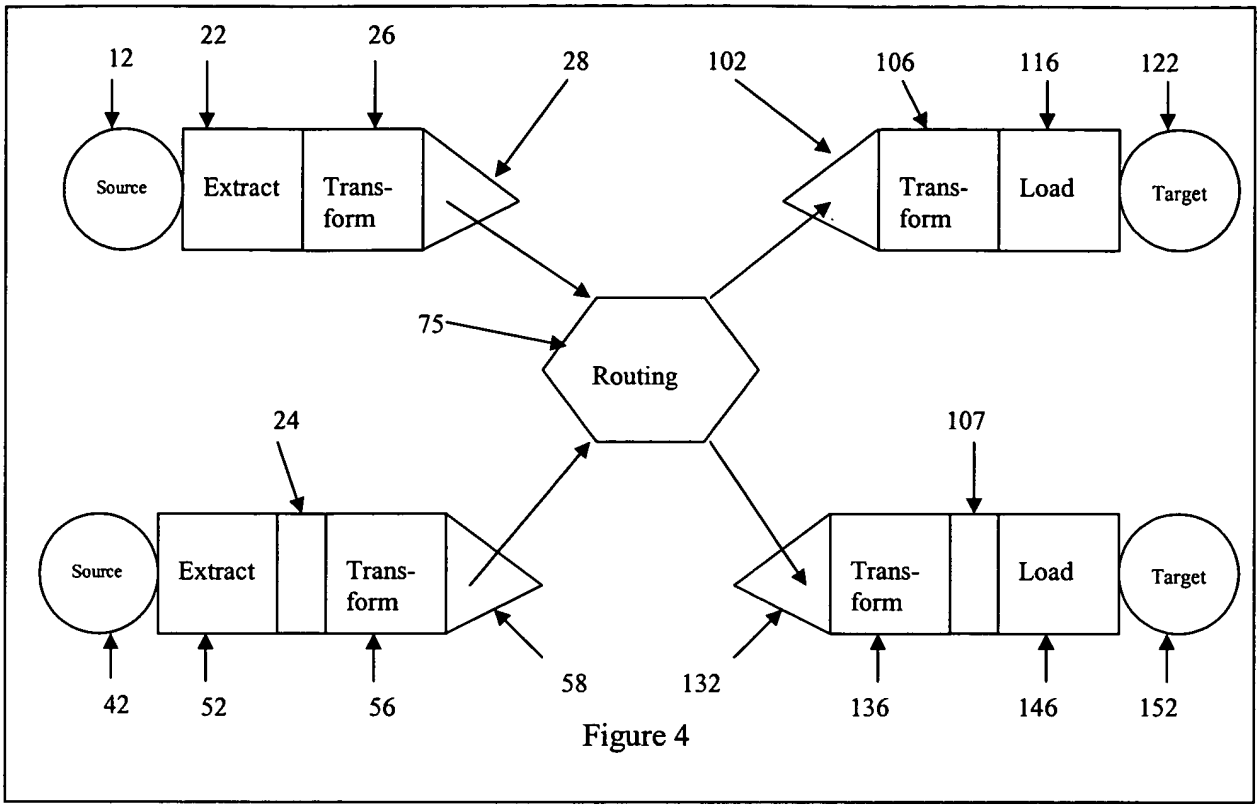


Figure 4

FIG. 4 illustrates a distributed computing system in which the extract and load steps are isolated from the router. Data flows from the two sources (12 and 42) on the left, through the central router (75) in the middle, and to two targets (122 and 152) on the right. The upstream components are represented by the boxes between the sources and the router and the downstream components are represented by the boxes between the router and the targets. The upstream components extract the data from the sources prior to sending the data to the router. The router transfers the data to the appropriate downstream component. After receiving the data, the downstream components load the data onto the targets. By isolating the router from the extract and load steps, the router workload is reduced, which allows the router to focus on transferring data from the upstream components to the downstream components. Allowing the router to focus on transferring data increases the router data transfer throughput, which increases the router efficiency. Because the router is the bottleneck within the distributed computing system,

an increase in router efficiency leads to a corresponding increase in efficiency of the distributed computing system.

The invention is an improvement over the prior art systems because the invention isolates the extract and load steps from the transfer step. Some prior art systems, such as those described above, use the router to perform the extract, transfer, and load steps. The present invention represents an improvement over these systems because, as described above, it isolates the extract and load steps from the router, thereby increasing the efficiency of the router and the distributed computing system. Other prior art systems gather data from a plurality of sources and compile the data into a single data set. These systems extract the data from the single data set, transfer the data to a single source, and load the data onto the single target. These systems do not contain a router, as it is unnecessary because there is only one source and only one target. Instead, these systems utilize a computer at the source side to perform the extract, transfer, and load steps. Thus, a single computer performs all three steps and, consequently, has the same limitations as the aforementioned prior art routers. These prior art systems, either standing alone or in combination, do not teach or suggest the isolation of the extract, transfer, and load steps from each other. Thus, the present invention represents an improvement over these systems because it allows the extract, transfer, and load steps to be isolated from one another, thereby increasing the distributed computing system efficiency.

The invention is also an improvement over prior art systems because the invention allows the extract step to be simultaneously performed for a plurality of sources. Prior art systems that utilize a centralized router to perform the extract, transfer, and load steps are limited in that they can only perform the extract step on one source at a time. Thus, the extract operation is performed *sequentially* for a plurality of data sets. The prior art systems that combine all of the

source data into a single source data set, and then extract the data from the single source data set, transfer the data to the target, and load the data onto the target are limited in that there is only one data set, so they can only perform the extract operation on the single data set. Thus, the extract operation is performed *sequentially* for a *single* data set. Consequently, the invention is also an improvement over prior art systems because the invention allows the extract step to be *simultaneously* performed for *a plurality* of sources.

Claim 1 is directed at a method for delivering information within a computing environment. The method of claim 1 comprises an eight-step process in which the first step is "a) extracting information from an information source", which is performed by extract component 22 or 52 in FIGS. 4 and 7 and described in paragraph 25 of the specification. The second step in the method of claim 1 is "b) transforming the extracted information", which is performed by transform component 26 or 56 in FIGS. 4 and 7 and described in paragraphs 26-28 and 45 of the specification. The third step in the method of claim 1 is "c) wrapping the transformed information into a message envelope having a standard format", which is performed by source adapter component 28 or 58 in FIGS. 4, 6, and 7 and described in paragraphs 29-34 of the specification. The fourth step in the method of claim 1 is "d) routing the message envelope to at least one information target", which is performed by router component 75 in FIGS. 3-10 and described in paragraphs 35 and 38-43 of the specification. The fifth step in the method of claim 1 is "e) unwrapping the message envelope to reveal the information received", which is performed by target adapter 102 or 132 in FIGS. 4 and 7 and described in paragraphs 29-34, 36, 37, 39, and 44-46 of the specification. The sixth step in the method of claim 1 is "f) mapping the received information to a format required by the information target", which is performed by target adapter 102 or 132 in FIGS. 4 and 7 and described in paragraphs 32, 34, 36, 37, 39, 45,

and 46 of the specification. The seventh step in the method of claim 1 is "g) transforming the received information", which is performed by transform component 106 or 136 in FIGS. 4 and 7 and described in paragraphs 26-28, 36, 37, 39, 45 and 46 of the specification. The eighth step in the method of claim 1 is "h) loading the received information into the information target", which is performed by load component 116 or 146 in FIGS. 4 and 7 and described in paragraphs 36, 37, 39, 45, and 46 of the specification. Claim 1 also contains the following limitation: "wherein the extracting, transforming, and wrapping steps (a)-(c), respectively, are isolated from the routing step (d) such that the extracting, transforming, and wrapping steps may be executed simultaneously for a plurality of information sources distributed across the computing environment to produce a plurality of message envelopes and wherein the routing, unwrapping, mapping, transforming, and loading steps (d)-(h), respectively, are repeated for each of the plurality of message envelopes," which is shown in FIGS. 3, 4, 7, 9, and 10 and described in paragraphs 6, 23, 24, 29, 33, 41, 48, and 49 of the specification.

Claim 2 depends on claim 1 and adds the limitation "wherein the information is pulled from the source during the extracting step (a)", which is described in paragraph 25 of the specification.

Claim 3 depends on claim 1 and adds the limitation "wherein the information is pushed from the source during the extracting step (a)", which is described in paragraph 25 of the specification.

Claim 4 depends on claim 1 and adds the limitation "wherein the information extracted during step (a) comprises content changes to the source information at the time step (a) is performed as compared to the source information at a previous point in time", which is described in paragraph 25 of the specification.

Claim 5 depends on claim 1 and adds the limitation "wherein transforming the extracted information during step (b) further comprising applying one or more business rules to modify the extracted information", which is described in paragraph 26-28 of the specification.

Claim 6 depends on claim 1 and adds the limitation "wherein the message envelope further comprises an identification of the information source, a content definition identification and the content of the transformed information", which is described in paragraph 29-32 of the specification.

Claim 7 depends on claim 6 and adds the limitation "wherein the content definition identification is used to retrieve the content definition from a metadata repository", which is described in paragraph 32 of the specification.

Claim 8 depends on claim 6 and adds the limitation "wherein wrapping the message envelope further comprising retrieving content definition from a metadata repository and applying the content definition to the transformed information to produce a message envelope", which is described in paragraph 29-32 of the specification.

Claim 9 depends on claim 6 and adds the limitation "further comprising placing the message envelope into an inbox queue to a router component for routing according to step (d)", which is performed by source adapter component 28 or 58 in FIGS. 4, 6, and 7 and described in paragraphs 30, 38, and 41 of the specification.

Claim 10 depends on claim 9 and adds the limitation "wherein the information sources publish the message envelope to the inbox queue and the router component subscribes to the inbox queue", which is described in paragraphs 30, 38, and 41 of the specification.

Claim 11 depends on claims 10 and adds the limitation "further comprising retrieving the message envelope from the inbox queue, looking up the address of the information target in a

cross-reference table, and transmitting the message envelope to the information target", which is performed by router component 75 in FIGS. 3-10 and described in paragraphs 41-43 of the specification.

Claim 12 depends on claim 11 and adds the limitation "wherein looking up the address of the information target is cross-referenced by the identity of the information source", which is described in paragraph 43 of the specification.

Claim 13 depends on claim 12 and adds the limitation "wherein the cross-reference table resides in local memory within the router component", which is described in paragraph 43 and FIG. 5 of the specification.

Claim 14 depends on claim 11 and adds the limitation "wherein transmitting the message envelope comprises placing the message envelope into an information target queue", which is described in paragraph 43 of the specification.

Claim 15 depends on claim 11 and adds the limitation "wherein the router component publishes the message envelope to the outbox queue and the information target subscribes to the outbox queue", which is described in paragraph 43 of the specification.

Claim 16 depends on claim 15 and adds the limitation "wherein the message envelope is retrieved from the outbox queue prior to unwrapping the message envelope", which is described in paragraph 43-44 of the specification.

Claim 17 depends on claim 8 and adds the limitation "wherein unwrapping the message envelope further comprising retrieving content definition from the metadata repository and applying the content definition to the message envelope to reveal the transformed information", which is described in paragraph 29-34, 43, and 44 of the specification.

Claim 18 depends on claim 1 and adds the limitation "further comprising after unwrapping the message envelope, filtering the transformed information prior to loading the transformed information", which is performed by filter component 104 in FIG. 7 and described in paragraph 46 of the specification.

Claim 19 depends on claim 1 and adds the limitation "further comprising after unwrapping the message envelope, aggregating a plurality of transformed information and loading the aggregation of transformed information into the information target as a batch", which is performed by time-period aggregator component 108 in FIG. 7 and described in paragraph 46 of the specification.

Claim 20 depends on claim 1 and adds the limitation "wherein the information target comprises a data warehouse and a data mart", which is described in paragraph 50 of the specification.

Claims 21 depends on claim 1 and adds the limitation "wherein the method for delivering information is executed on a plurality of computing platforms within the computing environment", which is described in paragraph 48 of the specification.

Claim 22 depends on claim 21 and adds the limitation "wherein the plurality of computing platforms comprise information domains for an enterprise", which is described in paragraphs 17-20 and 49 of the specification.

Claim 23 is another claimed embodiment directed at a method for delivering information within a computing environment. The method of claim 23 comprises an six-step process in which the first step is "a) extracting information from an information source", which is performed by extract component 22 or 52 in FIGS. 4 and 7 and described in paragraph 25 of the specification. The second step in the method of claim 23 is "b) transforming the extracted

information", which is performed by transform component 26 or 56 in FIGS. 4 and 7 and described in paragraphs 26-28 and 45 of the specification. The third step in the method of claim 23 is "c) isolating the transformed information by wrapping the transformed information into a message envelope having a standard format", which is performed by source adapter component 28 or 58 in FIGS. 4 and 7 and described in paragraphs 6, 23, 24 and 29-34 of the specification. The fourth step in the method of claim 23 is "d) routing the message envelope to at least one information target", which is performed by router component 75 in FIGS. 3-10 and described in paragraphs 35 and 38-43 of the specification. The fifth step in the method of claim 23 is "e) unwrapping the message envelope to reveal the transformed information", which is performed by target adapter 102 or 132 in FIGS. 4 and 7 and described in paragraphs 29-34, 36, 37, 39, and 44-46 of the specification. The sixth step in the method of claim 23 is "h) loading the transformed information into the information target", which is performed by load component 116 or 146 in FIGS. 4 and 7 and described in paragraphs 36, 37, 39, 45, and 46 of the specification.

VI. ISSUES

1. Do *Brandt* (U.S. Patent 6,714,979), *Yee* (European Patent 1,016,989), or their combination render claims 1-23 unpatentable by teaching or suggesting the simultaneous execution of the extracting, transforming, and wrapping steps for a plurality of information sources in a distributed across the computing environment, as required to establish a *prima facie* case of obviousness under 35 USC §103(a)?
2. Do *Brandt*, *Yee*, or their combination render claims 1-23 unpatentable by teaching or suggesting a routing step, as required to establish a *prima facie* case of obviousness under 35 USC §103(a)?

3. Do *Brandt*, *Yee*, or their combination render claims 1-23 unpatentable by teaching or suggesting the isolation of extracting, transforming, and wrapping steps from the routing step, as required to establish a *prima facie* case of obviousness under 35 USC §103(a)?
4. Is there a suggestion or motivation to combine the teachings of *Brandt* with the teachings of *Yee* to obtain the claimed invention, as required to establish a *prima facie* case of obviousness under 35 USC §103(a)?

VII. GROUPING OF CLAIMS

Appellants expressly state that the claims stand or fall together. However, in the event that new references are cited or new arguments advanced for rejection of the claims, appellants reserve the right to argue that the claims do not stand or fall together.

VIII. ARGUMENTS

A. The Examiner has failed to establish a *prima facie* case of obviousness with respect to claims 1-23 because not all of the claimed limitations are taught or suggested by *Brandt* and *Yee* and there is no motivation to combine *Brandt* with *Yee*, two of the requirements for a *prima facie* case of obviousness.

The Examiner's obviousness rejections are not well founded because the Examiner has not established a *prima facie* case of obviousness. The requirements for establishing a *prima facie* case of obviousness are well established:

> To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on

> Applicants' disclosure. MPEP § 2142 citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991) (emphasis added).

Similarly, the fact that the Examiner has the burden of proof with respect to the elements of the *prima facie* case of obviousness is also well defined:

> The initial burden is on the examiner to provide some suggestion of the desirability of doing what the inventor has done. "To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." MPEP § 2142 quoting *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985).
>
> When the motivation to combine the teachings of the references is not immediately apparent, it is the duty of the examiner to explain why the combination of the teachings is proper. MPEP § 2142 citing *Ex parte Skinner*, 2 USPQ2d 1788 (Bd. Pat. App. & Inter. 1986).

With respect to claims 1-23, the Examiner has not met his burden of presenting the *prima facie* case of obviousness with respect to the first or third prongs of the obviousness test because, as explained in detail below, *Brandt* and *Yee* do not teach or suggest all of the limitations of claims 1-23, and there is no suggestion or motivation to combine the teachings of *Brandt* with the teachings of *Yee* to obtain the invention of claims 1-23.

B. The Examiner has failed to establish a *prima facie* case of obviousness because *Brandt* and *Yee* do not teach or suggest the simultaneous execution of the extracting, transforming, and wrapping steps for a plurality of sources, as recited in claim 1.

Claim 1 recites the limitation of simultaneous execution of the extracting, transforming, and wrapping steps for a plurality of sources in a distributed computing environment. More specifically, claim 1 contains the limitation:

> wherein the extracting, transforming, and wrapping steps (a)-(c), respectively, are isolated from the routing step (d) such that the extracting, transforming, and wrapping steps may be executed simultaneously for a plurality of information sources distributed across the computing environment to produce a plurality of message envelopes and wherein the routing, unwrapping, mapping, transforming,

> and loading steps (d)-(h), respectively, are repeated for each of the plurality of message envelopes. (Emphasis added)

As shown in applicants' FIG. 4, the extract components 22, 52, the transform components 26, 56, and the source adapter components 28, 58, are located at a plurality of sources 12, 42. The branching relationship between the plurality of sources and the single router allows the extracting, transforming and wrapping steps to occur simultaneously for a plurality of sources. Stated another way, the extracting, transforming, and wrapping steps to occur in parallel (i.e. simultaneously for source 12 and 42). Thus, the ability to simultaneously execute the extracting, transforming, and wrapping steps for a plurality of sources is an improvement over the prior art.

The prior art of record does not teach or suggest the simultaneous execution of the extracting, transforming, and wrapping steps for a plurality of sources. In paragraph 32(C) of the January 25, 2005 Office Action, the Examiner stated that this limitation was taught by *Brandt*:

> Column 4 lines 1-8 *Brandt* discloses detail[ed] data records (BDR) that are extracted from one or more telecommunication network switch mechanisms, implying that BDR are extracted from one or more information sources. *Brandt* also discloses on column 22 lines 20-21 that multiple runstream files are processed simultaneously. The runstream files happen to contain the BDR (column 22 lines 6-7). This is to say that the BDR extracted from one or more information sources would be process simultaneously.

A careful review of *Brandt* reveals that the Examiner's reading of the reference is incorrect. The first cited section of *Brandt*, which is from *Brandt's* summary of his invention, reads:

> [A] device for receiving customer's raw telecommunications call detail data records from one or more telecommunications network switch mechanisms and extracting certain call detail records for predetermined customers; a harvest device for receiving the extracted call detail data records and replacing a call detail data item therein with a corresponding dimension key found in an associated dimension build table for that call detail item. *Brandt*, col. 4, lines 1-8.

As clearly shown in *Brandt's* FIG. 7, the device (Common Data Gateway 430) first receives the call detail records from the switch to form a consolidated data set. In other words, the switches

send data to a common device (the Common Data Gateway 430), resulting in consolidation of multiple data sets (i.e. from items 410, 420, 422a, 422b, and 425) into a single device (the Common Data Gateway 430). After consolidation of the data into the single device, *Brandt* then extracts certain records for predetermined customers from the consolidated single device. In other words, *Brandt* does not perform a plurality of extractions to extract data from a plurality of information sources distributed across the computing environment, but rather consolidates information received from a plurality of switches into a single device, and *then* performs a single extraction on the information in the single device. Because *Brandt* extracts his data from a single device, *Brandt* must perform his extract steps sequentially. This distinguishing feature is evident when *Brandt's* FIG. 7 is compared with Applicants' FIG. 4; namely Brandt has a serial relationship between the extract process 435, harvesting process 440, and load process 465, whereas the Applicant has a parallel relationship between the router 75, the plurality of sources 12, 42, and the plurality of targets 122, 152. Thus, *Brandt* fails to teach or suggest the claimed limitation of simultaneously executing the extracting, transforming, and wrapping steps for a plurality of information sources distributed across the computing environment.

Applicants' reading of *Brandt* is further supported by FIG. 8 and col. 15, line 51 – col. 18, line 33, where more detail is provided about the extract function of *Brandt*. Specifically, FIG. 8 shows switches 402 sending switch records to call processing 405, which (among other functions) validates and prices the raw call detail records (CDRs) to form raw billing detail records (BDRs). The raw BDRs are sorted by product and division runstream files (e.g., NCBS VNET 410, NCBS Vision 410, Tollfree 420, etc.). *Brandt* goes on to explain that "the various divisional/runstream files may be consolidated in each CDG extract process, to generate a single extracted daily file 523 per division in a data center." *See Brandt*, col. 16, lines 41-43 (emphasis

added). "Next, as indicated at step 523, the raw billing detail records are input from the runstreams, e.g. Tollfree, and a reconciliation is performed at step 528 to ensure that all BDR records from the runstreams are received files for the current customer list. Then, as indicated at step 530, the extract process is performed for the BDR datasets as they become available from the runstreams." *See Brandt*, col. 17, lines 7-13 (emphasis added). This detailed discussion of the extract function 500 of *Brandt* makes clear that data is extracted from a single, consolidated data source rather than a plurality of information sources distributed across the computing environment as recited in independent claim 1, and claims 2-22 depending therefrom. Consequently, *Brandt* fails to teach or suggest the claimed limitation of simultaneously executing the extracting, transforming, and wrapping steps for a plurality of information sources distributed across the computing environment.

The Examiner's reliance on *Brandt* to teach the simultaneous extracting, transforming, and wrapping steps is also unfounded. As indicated above, the Examiner states:

> *Brandt* also discloses on column 22 lines 20-21 that multiple runstream files are processed simultaneously. The runstream files happen to contain the BDR (column 22 lines 6-7). This is to say that the BDR extracted from one or more information sources would be process simultaneously. January 25, 2005 Office Action, paragraph 32(C).

At first blush, the cited section of *Brandt* appears to support the Examiner's statement. However, when the cited section is read in the context of a complete sentence, it is clear that the simultaneous processing of files refers to a completely separate section of the *Brandt* invention:

> Each available file from the upstream billing systems is processed as it is available. As a result, multiple runstream files are process simultaneously, and Decision Support Server 475 (FIG. [7][1]) ftp pulls hundreds of daily files from the harvesting (Common Data Gateway mainframe), as indicated in steps 669a, 669b of FIG. 11. *Brandt*, col. 22, lines 19-24.

[1] The cited section of *Brandt* reads "Decision Support Server 475 (FIG. 6)"; however the Decision Support Server 475 is not illustrated in FIG. 6. The Decision Support Server 475 only appears in FIG. 7.

As seen in *Brandt's* FIG. 7, the Decision Support Server (DSS) 475 is located downstream of the Data Marts 470, the load process 465, the harvesting component 600, and the extract process 500. By contrast, claim 1 recites that the "extracting, transforming, and wrapping steps may be executed simultaneously for a plurality of information sources distributed across the computing environment". In order for the Examiner's interpretation of *Brandt* to teach the claimed limitation (e.g. *Brandt's* extract process 500 teaches the extracting step of claim 1, *Brandt's* harvesting component 600 teaches the transforming step of claim 1, and *Brandt's* load process 465 teaches the loading step of claim 1), *Brandt's* teaching of simultaneous processing would have to apply to the extract process 500 and the harvesting component 600, not the DSS 475. As taught by *Brandt*, the only simultaneous processing that occurs does so at DSS 475, which is downstream of the extract process 500, the harvesting component 600, and the target (Data Mart 470). Thus, *Brandt's* teaching of simultaneous processing by DSS 475 cannot be applied to the extract process 500 and the harvesting component 600. Consequently, *Brandt* does not teach or suggest the simultaneous processing limitation of claim 1.

The Examiner does not rely on either *Yee* to teach or suggest the simultaneous executing the extracting, transforming, and wrapping steps for a plurality of information sources distributed across the computing environment, and rightfully so as *Yee* fails to teach or suggest the claimed limitation. Consequently, claims 1-23 should be allowed over the cited prior art because the cited prior art fails to teach or suggest the simultaneous executing the extracting, transforming, and wrapping steps for a plurality of information sources distributed across the computing environment of claim 1-23, a requirement for a *prima facie* case of obviousness under 35 USC § 103(a).

C. The Examiner failed to establish a *prima facie* case of obviousness because *Brandt* and *Yee* do not teach or suggest the routing step recited in claims 1-23.

The Examiner's reliance on *Brandt* to teach the routing step recited in the claims is unfounded. The steps to the method of claim 1 read:

> a) extracting information from an information source;
> b) transforming the extracted information;
> c) wrapping the transformed information into a message envelope having a standard format;
> d) routing the message envelope to at least one information target;
> e) unwrapping the message envelope to reveal the information received;
> f) mapping the received information to a format required by the information target;
> g) transforming the received information; and
> h) loading the received information into the information target. (Emphasis added).

A thorough reading of *Brandt* reveals that *Brandt* fails to teach or suggest the routing step of claim 1. In the January 25, 2005 Office Action, the Examiner contends that *Brandt*, col. 14, lines 57-67 teaches the routing step of claim 1:

> As to claim 1, *Brandt* teaches a method for delivering information within a computing environment, comprising: ... (d) routing the message envelope to at least one information target (Col. 14, lines 57-67).

The cited section of *Brandt* reads:

> a) an Extract process 500 for creating selection tables including all current nMCI Interact customers, compressing files for transmission to service centers, and extracting (Priced Reporting enabled) records from divisions or runstreams; and, b) a Harvesting component 600 including processes for creating dimension tables based on data within selected BDRs, applying business rules to the data, transforming the data into centralized fact table, creating load files for data marts, and compressing files for transmission; 5) Operational Data Store (ODS) component 450, including a process 465 for loading transformed billing detail records. *Brandt*, col. 14, lines 57-67.

Clearly, the cited portion of *Brandt* does not teach or suggest a routing component or a routing step. In fact, nowhere in *Brandt's* lengthy disclosure does he teach or suggest a routing component or the need for a routing step to route information from a plurality of sources to a

plurality of targets. As it is understood within the art, the term "route" means that a specific target for which a data packet is destined must be selected from a plurality of other targets. Otherwise, the information would be merely transmitted from a single source to a single target. As discussed above, *Brandt's* invention does not require a routing step to select a data transfer route because the Common Data Gateway 430 combines all of the data from the numerous data sources 410, 420, 422a, 422b, and 425 into a single data source and performs the extracting and transforming steps on the single data source within a single component: the Common Data Gateway 430. Moreover, the singular data from the Common Data Gateway 430 is sent to a single load process 465. See *Brandt*, col. 14, line 67 – col. 15, line 4. Although *Brandt's* FIG. 7 shows connectivity between the Common Data Gateway 430 and the dimension table 460, the dimension table 460 is not a loading process, but merely a group of tables accessed by the loading process 460. See *Brandt*, col. 15, lines 2-4. Thus, *Brandt* fails to teach or suggest the routing step recited in claims 1-23.

The Examiner does not rely on *Yee* to teach or suggests the routing step, and rightfully so as *Yee* fails to teach or suggest the claimed routing step. Consequently, claims 1-23 should be allowed over the cited prior art because the cited prior art fails to teach or suggest the routing step of claim 1-23, a requirement for a *prima facie* case of obviousness under 35 USC § 103(a).

D. The Examiner has failed to establish a *prima facie* case of obviousness because *Brandt* and *Yee* do not teach or suggest the isolation of the extracting, transforming, and wrapping steps from the routing step as recited in claim 1.

The prior art of record does not teach or suggest the isolation of the extracting, transforming, and wrapping steps from the routing step as recited in claim 1. More specifically, claim 1 contains the limitation:

> wherein the extracting, transforming, and wrapping steps (a)-(c), respectively, are isolated from the routing step (d) such that the extracting, transforming, and

> wrapping steps may be executed simultaneously for a plurality of information sources distributed across the computing environment to produce a plurality of message envelopes and wherein the routing, unwrapping, mapping, transforming, and loading steps (d)-(h), respectively, are repeated for each of the plurality of message envelopes. (Emphasis added)

Applicants' FIG. 4 clearly shows that the extracting, transforming, and wrapping steps are isolated from the routing step. More specifically, the router component 75 is isolated from the extract components 22, 52, the transform components 26, 56, and the source adapter components 28, 58. It is impossible for Brandt to teach that the extracting, transforming, and wrapping steps are isolated from the routing step because, as explained above, Brandt fails to teach or suggest the claimed routing step. However, in paragraph 4 of the January 25, 2005 Office Action, the Examiner stated that this limitation was taught by *Brandt*, col. 4, lines 1-8 and col. 16, lines 29-43. The cited section of *Brandt* reads:

> [A] device for receiving customer's raw telecommunications call detail data records from one or more telecommunications network switch mechanisms and extracting certain call detail records for predetermined customers; a harvest device for receiving the extracted call detail data records and replacing a call detail data item therein with a corresponding dimension key found in an associated dimension build table for that call detail item. *Brandt*, col. 4, lines 1-8.

> Once retrieved from the StarOE server 280, the customer selection list may be transferred via network data mover "NDM" to the CDG extract processes which may be awaiting this file at other datacenters to trigger BDR extract processes at those other centers, assuming daily billing feeds are available at those data centers. In the preferred embodiment, the StarOE customer selection list file is used to extract Vnet, Vision, and Tollfree daily billing call data records for nMCI Interact/StarODS priced reporting customers from the daily feeds from Tollfree/NCBS. Daily BDR's are available by division for Tollfree and by runstream from NCBS (Vision/VNET). The various divisional/runstream files may be consolidated in each CDG extract process, to generate a single extracted daily data file 523 per division in a data center. *Brandt*, col. 16, lines 29-43.

Clearly, the cited passages do not teach or suggest the isolation of the extracting, transforming, and wrapping steps from the routing step as recited in claim 1. In fact, Brandt is completely silent as to the structural arrangement of his extract, harvesting, and load processes or whether

any of these components are isolated from one another. Lacking such a teaching, *Brandt* fails to teach or suggest the claimed limitation of "wherein the extracting, transforming, and wrapping steps (a)-(c), respectively, are isolated from the routing step (d)."

The Examiner does not rely on *Yee* to teach or suggests the isolation of the extract, transform, and wrap step from the routing step, and rightfully so as *Yee* fails to teach or suggest the claimed isolation limitation. Consequently, claim 1 should be allowed over the cited prior art because the cited prior art fails to teach or suggest the routing step of claim 1, a requirement for a *prima facie* case of obviousness under 35 USC § 103(a).

E. The Examiner has failed to establish a *prima facie* case of obviousness because there is no suggestion or motivation to modify the teachings of *Brandt* and *Yee* to obtain the wrapping and unwrapping steps recited in claims 1-23.

There is no suggestion or motivation to combine the teachings of *Brandt* with the teachings of *Yee* to obtain the wrapping and unwrapping steps of claims 1-23. *Brandt* does not disclose the wrapping and unwrapping steps of claim 1, nor does he disclose a need for such. The paragraphs of *Yee* relied upon by the Examiner to teach the wrapping and unwrapping steps of claims 1-23 are taken in isolation and in no way relate to or disclose the specific sequence of steps recited by Applicants. In other words, there is no teaching or suggestion in *Brandt* or *Yee* to make Applicants' claimed combination or a reasonable expectation of success to do so. The Examiner states that it would have been obvious to "combine the teaching of *Yee* and *Brandt* because the teaching of *Yee* would have improved the system of *Brandt* by providing a means for sending and propagating messages across varying platforms." However, no such teaching is present in either *Brandt* or *Yee*. In fact, the primary reference *Brandt* is completely silent as to any additional steps being carried out between the harvesting component 600 and the load

process 465. Furthermore, such motivation as cited by the Examiner is expressly set forth in Applicants' disclosure, for example in the Field of Invention:

> The invention is a distributed extract, transfer, and load (ETL) computer method (hereinafter referred to as Distributed ETL) for linking together multiple information domains residing across an enterprise-wide computing environment in order to share corporate information, while reducing the time required to deliver that information. The invention overcomes the many-to-many relationships that exist between information sources and targets residing within each domain by implementing a central router to deliver information to and from these domains.

Applicants appreciate that the Examiner understands the complimentary purpose and relationship of Applicants' Distributed ETL architecture to the primary reference *Brandt*, but the Examiner may not use such understanding as a basis for combining *Brandt* and *Yee* because doing so constitutes the impermissible use of hindsight. As stated by the court of Appeals for the Federal Circuit in *In re Kotzab*:

> A critical step in analyzing the patentability of claims pursuant to section 103(a) is casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field. Close adherence to this methodology is especially important in cases where the very ease with which the invention can be understood may prompt one "to fall victim to the insidious effect of a hindsight syndrome where that which only the invention taught is used against its teacher." 217 F.3d 1365, 1369, 55 U.S.P.Q.2d 1313 (Fed. Cir. 2000).

By failing to provide a motivation to combine the teachings of *Brandt* and *Yee*, the Examiner has fallen victim to the insidious effect of a hindsight syndrome and used that which is taught against its teacher. Lacking a motivation to combine the teachings of *Brandt* and *Yee*, the Examiner has failed to establish a *prima facie* case of obviousness against claims 1-23 as there is no teaching or suggestion to combine *Brandt* and *Yee* to achieve the method recited in the pending claims, and thus claims 1-23 should be allowed over the cited prior art.

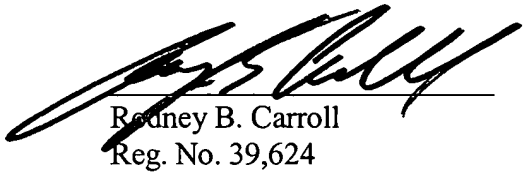
IX. CONCLUSION

In view of the above arguments the Applicants respectfully request that the final rejection of the claims be reversed and the case advanced to issue.

The Commissioner is hereby authorized to charge payment of any further fees associated with any of the foregoing papers submitted herewith, or to credit any overpayment thereof, to Deposit Account No. 21-0765, Sprint.

Respectfully submitted,
CONLEY ROSE, P.C.

Date: May 27, 2005



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X. APPENDIX

The text of the claims involved in the appeal is:

1. A method for delivering information within a computing environment, comprising:

a) extracting information from an information source;

b) transforming the extracted information;

c) wrapping the transformed information into a message envelope having a standard format;

d) routing the message envelope to at least one information target;

e) unwrapping the message envelope to reveal the information received;

f) mapping the received information to a format required by the information target;

g) transforming the received information; and

h) loading the received information into the information target,

wherein the extracting, transforming, and wrapping steps (a)-(c), respectively, are isolated from the routing step (d) such that the extracting, transforming, and wrapping steps may be executed simultaneously for a plurality of information sources distributed across the computing environment to produce a plurality of message envelopes and wherein the routing, unwrapping, mapping, transforming, and loading steps (d)-(h), respectively, are repeated for each of the plurality of message envelopes.

2. The method of claim 1 wherein the information is pulled from the source during the extracting step (a).

3. The method of claim 1 wherein the information is pushed from the source during the extracting step (a).

4. The method of claim 1 wherein the information extracted during step (a) comprises content changes to the source information at the time step (a) is performed as compared to the source information at a previous point in time.

5. The method of claim 1 wherein transforming the extracted information during step (b) further comprising applying one or more business rules to modify the extracted information.

6. The method of claim 1 wherein the message envelope further comprises an identification of the information source, a content definition identification and the content of the transformed information.

7. The method of claim 6 wherein the content definition identification is used to retrieve the content definition from a metadata repository.

8. The method of claim 6 wherein wrapping the message envelope further comprising retrieving content definition from a metadata repository and applying the content definition to the transformed information to produce a message envelope.

9. The method of claim 6 further comprising placing the message envelope into an inbox queue to a router component for routing according to step (d).

10. The method of claim 9 wherein the information sources publish the message envelope to the inbox queue and the router component subscribes to the inbox queue.

11. The method of claim 10 further comprising retrieving the message envelope from the inbox queue, looking up the address of the information target in a cross-reference table, and transmitting the message envelope to the information target.

12. The method of claim 11 wherein looking up the address of the information target is cross-referenced by the identity of the information source.

13. The method of claim 12 wherein the cross-reference table resides in local memory within the router component.

14. The method of claim 11 wherein transmitting the message envelope comprises placing the message envelope into an information target queue.

15. The method of claim 14 wherein the router component publishes the message envelope to the outbox queue and the information target subscribes to the outbox queue.

16. The method of claim 15 wherein the message envelope is retrieved from the outbox queue prior to unwrapping the message envelope.

17. The method of claim 8 wherein unwrapping the message envelope further comprising retrieving content definition from the metadata repository and applying the content definition to the message envelope to reveal the transformed information.

18. The method of claim 1 further comprising after unwrapping the message envelope, filtering the transformed information prior to loading the transformed information.

19. The method of claim 1 further comprising after unwrapping the message envelope, aggregating a plurality of transformed information and loading the aggregation of transformed information into the information target as a batch.

20. The method of claim 1 wherein the information target comprises a data warehouse and a data mart.

21. The method of claim 1 wherein the method for delivering information is executed on a plurality of computing platforms within the computing environment.

22. The method of claim 21 wherein the plurality of computing platforms comprise information domains for an enterprise.

23. A method for delivering information within a computing environment, comprising:

a) extracting information from an information source;

b) transforming the extracted information;

c) isolating the transformed information by wrapping the transformed information into a message envelope having a standard format;

d) routing the message envelope to at least one information target;

e) unwrapping the message envelope to reveal the transformed information; and

f) loading the transformed information into the information target.

IFW AF

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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission	86

Application Number	09/843,682
Filing Date	April 27, 2001
First Named Inventor	Duane L. Porter
Art Unit	2126
Examiner Name	Charles E. Anya
Attorney Docket Number	IDF 1616 (4000-04200)

ENCLOSURES (Check all that apply)

- [x] Fee Transmittal Form
  - [ ] Fee Attached
- [ ] Amendment/Reply
  - [ ] After Final
  - [ ] Affidavits/declaration(s)
- [ ] Extension of Time Request
- [ ] Express Abandonment Request
- [ ] Information Disclosure Statement
- [ ] Certified Copy of Priority Document(s)
- [ ] Reply to Missing Parts/ Incomplete Application
  - [ ] Reply to Missing Parts under 37 CFR 1.52 or 1.53
- [ ] Drawing(s)
- [ ] Licensing-related Papers
- [ ] Petition
- [ ] Petition to Convert to a Provisional Application
- [ ] Power of Attorney, Revocation Change of Correspondence Address
- [ ] Terminal Disclaimer
- [ ] Request for Refund
- [ ] CD, Number of CD(s) _____
  - [ ] Landscape Table on CD
- [ ] After Allowance Communication to TC
- [ ] Appeal Communication to Board of Appeals and Interferences
- [x] Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- [ ] Proprietary Information
- [ ] Status Letter
- [x] Other Enclosure(s) (please Identify below):

1) Acknowledgement Postcard

Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Conley Rose, P.C.		
Signature			
Printed name	Rodney B. Carroll		
Date	May 27, 2005	Reg. No.	39,624

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature	Karen A. Harris		
Typed or printed name	Karen A. Harris	Date	May 27, 2005

PTO/SB/17 (12-04)
Approved for use through 07/31/2006. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Effective on 12/08/2004.
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL
For FY 2005

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT	($) 500.00

Complete if Known	
Application Number	09/843,682
Filing Date	April 27, 2001
First Named Inventor	Duane L. Porter
Examiner Name	Charles E. Anya
Art Unit	2126
Attorney Docket No.	IDF 1616 (4000-04200)

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____

☑ Deposit Account Deposit Account Number: 21-0765 Deposit Account Name: Sprint

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☑ Charge fee(s) indicated below ☑ Charge fee(s) indicated below, **except for the filing fee**

☑ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☑ Credit any overpayments

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FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES Fee ($)	FILING FEES Small Entity Fee ($)	SEARCH FEES Fee ($)	SEARCH FEES Small Entity Fee ($)	EXAMINATION FEES Fee ($)	EXAMINATION FEES Small Entity Fee ($)	Fees Paid ($)
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES

Fee Description	Fee ($)	Small Entity Fee ($)
Each claim over 20 or, for Reissues, each claim over 20 and more than in the original patent	50	25
Each independent claim over 3 or, for Reissues, each independent claim more than in the original patent	200	100
Multiple dependent claims	360	180

Total Claims	Extra Claims	Fee ($)	Fee Paid ($)
_____ - 20 or HP =	0	x _____	= 0.00

HP = highest number of total claims paid for, if greater than 20

Indep. Claims	Extra Claims	Fee ($)	Fee Paid ($)
_____ - 3 or HP =	0	x _____	= 0.00

HP = highest number of independent claims paid for, if greater than 3

Multiple Dependent Claims Fee ($)	Fee Paid ($)
_____	_____

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee ($)	Fee Paid ($)
_____ - 100 =	0	/ 50 = 0 (round up to a whole number)	x 0	= 0.00

4. OTHER FEE(S)

	Fees Paid ($)
Non-English Specification, $130 fee (no small entity discount)	0.00
Other: Appeal Brief	500.00

SUBMITTED BY

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Name (Print/Type)	Rodney B. Carroll		Date May 27, 2005